

Sub 1
All
outlet, wherein said fluid creates a moving fluid front across said absorbent material as said fluid contacts said material and said absorbent material is shaped such that the flow speed of said moving fluid front across said material is controlled by the shape of the material.

Please cancel claim 5.

Please amend claim 6 as follows:

6 (Once amended). A device for providing a continuous flow within a microfluidic channel when using gravitational force as a driving source, comprising:

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a fluid reservoir having a top surface and a bottom surface, and vent means for relieving pressure within said reservoir;

a first microfluidic channel connected to said reservoir;

and a first passageway for coupling said first channel to said reservoir at a position between said top surface and said bottom surface,

wherein said first passageway is sized such that fluid entering said reservoir from said first channel flows in a smooth, continuous stream.

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[Please amend claim 7 as follows:]

7 (Once amended). A device for providing a visual indication of the concentration of an analyte in a microfluidic channel, comprising:

a microfluidic detection channel having an inlet and an outlet;

an indicator channel coupled to said detection channel at said inlet;

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a sample channel coupled to said detection channel at said inlet opposite said indicator channel;

a first fluid introduced through said indicator channel into said detection channel;

a second fluid introduced through said sample channel into said detection channel toward said outlet;

and indicating means, containing indicia of second fluid concentration within said detection channel, located in proximity to said detection channel,

wherein when said first and second fluids flow within said detection channel toward said outlet, a diffusion pattern is formed indicative of the concentration of said second fluid within said detection channel such that the diffusion pattern may be compared to said indicating means to determine concentration within said detection channel.

Please amend claim 8 as follows:

8 (Once amended). The device of claim 7, wherein said indicating means further includes a template having a plurality of viewing windows such that said diffusion pattern within said detection channel visible within said windows may be compared to said indicating means to determine concentration within said channel.

Please cancel claim 15.

Please amend claim 16 as follows:

16 (Once amended). A device for providing static resistance to flow in a microfluidic system, comprising:

a microfluidic channel, having an inlet and an outlet;

and a plurality of orifices, each having essentially the same dimensions, located in parallel within said channel between said inlet and outlet,

whereby said orifices provide a higher static resistance than a single orifice but a substantially lower dynamic resistance to flow.